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### Cancellation on the Day of Surgery in an Ambulatory Setting Due to Patient Factors: A Preliminary Study

### Cancelamento no Próprio Dia em Cirurgia de Ambulatório Devido a Fatores Relacionados com o Doente: Um Estudo Preliminar

**Keywords:** Ambulatory Surgical Procedures; Appointments and Schedules; Health Management

**Palavras-chave:** Agendamento de Consultas; Gestão em Saúde; Procedimentos Cirúrgicos Ambulatórios

Cancellations on the day of surgery cause a heavy burden for patients and pose a significant setback to health-care systems.<sup>1,2</sup> Just like for inpatient care, the cancellations in ambulatory surgery also contribute negatively for patients and health-care systems. The literature is, however, quite scarce concerning the parameters that are associated with missing a surgery in the ambulatory setting.<sup>1,2</sup> Some of these cancellations are due to patient factors and frequently limit the enrolment of a new patient due to logistic and clinical constraints. Available surgical periods are thus lost.<sup>1,2</sup>

We carried out a preliminary study at our hospital. We analysed a total of 19781 patients enrolled for elective day-case surgery in 2018, from which 1253 (6.33%) made a cancellation on their intended day of surgery (due to patient factors, the most prevalent being 'change in patient status' (33.04%; n = 414), 'missing surgery with a plausible reason' (28.01%; n = 351) and 'missing surgery without a plausible reason' (20.67%; n = 259). These numbers are in agreement with data from the literature.<sup>3</sup>

Patients residing closer to the hospital (under 10 km) were more likely to have cancellations than those residing more than 10 km away (36.7% vs 3.7%  $\chi^2$ ,  $p < 0.05$ ). This

could be because patients residing closer to the hospital have easier access to the hospital and may therefore be less reluctant in cancelling/postponing a surgical procedure.

Moreover, patients aged 65 years old and over had a higher cancellation rate (7.5% vs 5.3%  $\chi^2$ ,  $p < 0.05$ ). Patients of older age groups commonly have more comorbidities, increased limitations, and constraints in individual mobility. These factors may hinder the adequate completion of the process towards surgical treatment.

Finally, patients without a prior pre-operative medical appointment might have a higher likelihood of same day cancellation (those who cancelled were less likely to have had a pre-operative medical appointment (5.8% vs 14.01%  $\chi^2$ ,  $p < 0.05$ ). This suggests that, apart from what we already know, namely that attending the preoperative medical appointment is associated with a reduced likelihood of cancellation, patients without a prior pre-operative medical appointment regardless of the reason, might have a higher likelihood of same day cancellation in ambulatory surgery.<sup>4,5</sup>

These initial results of our study are valuable as a preliminary assessment that could lead to the possible development of algorithms aimed at anticipating the cancellation of a given patient. A risk prediction tool aimed at identifying with a high degree of accuracy those with a higher likelihood of cancellation on the same day could be developed, which would enable the enrolment of a replacement in case of effective cancellation. Such an approach could allow faster treatment for patients while also optimizing health-care resources.

### AUTHORS CONTRIBUTION

ECA: Draft of the paper.

JTO; MG; CF, AP: Critical review and approval of the final version.

**PROTECTION OF HUMANS AND ANIMALS**

The authors declare that the procedures were followed according to the regulations established by the Clinical Research and Ethics Committee and to the Helsinki Declaration of the World Medical Association updated in 2013.

**DATA CONFIDENTIALITY**

The authors declare having followed the protocols in use at their working center regarding patients' data publication.

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**COMPETING INTERESTS**

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## Benzodiazepine Use in Portugal: Revisiting the Stars of Liège Model

### Uso de Benzodiazepinas em Portugal: Revisitando o Modelo das Estrelas de Liège

**Keywords:** Benzodiazepines; Portugal

**Palavras-chave:** Benzodiazepinas; Portugal

Dear Editor,

We read a recent article in your journal regarding the use of benzodiazepines in Portugal.<sup>1</sup> According to the authors, only eleven different benzodiazepine types were prescribed to patients.

We were surprised that not a single patient was being prescribed with any of the other nine types of benzodiazepines which are still commercially available in Portugal.<sup>2</sup> We also wondered about the other five types of benzodiazepines which have been withdrawn from the market in Portugal.<sup>3</sup> It is not clear how the authors excluded the present and past abuse of these particular substances. We were also surprised to see that patients had not carried out urine or blood tests to confirm the drug use. What a patient

tells us in a questionnaire is always some kind of subjective information that should, whenever possible, be cross-checked with objective information.

The article discussion missed the important issue of the LOT benzodiazepines: lorazepam, oxazepam and temazepam. Another useful mnemonic for these molecules would be OTL: other than liver. These three drugs have no active metabolites after hepatic conjugation, and therefore present minimally affected half-lives in patients with liver disease,<sup>4</sup> e.g., hepatic cirrhosis due to alcohol and/or chronic viral infection.

Last, but not least, we would like to remind the stars of Liège model,<sup>5</sup> which has been used for decades for the purposes of psychopharmacological comparison among the different types of benzodiazepines. We recently adapted this classic visual model where each of the five arms of a pentagram star corresponds to a different psychopharmacological characteristic, e.g., somatic anxiolytic, psychic anxiolytic, antiepileptic, myorelaxant and hypnotic (Fig. 1). With this zero (null) to five (very powerful) scale, clinical researchers are thus able to classify any benzodiazepine with an intrinsically unique signature. Although we were quite disappointed for not finding a citation of this model in the